

On-screen display (OSD) 22 responds to signals received from microprocessor 20.

OSD+Video 24 then superimposes the signals from OSD 22 upon the video signal received from microprocessor 20. The audio and video portions of the signal are then available to the viewer by the means of video (RF) out 30, video out 32, audio (Left) 34, and audio (Right) out 36.

The above described functions of microprocessor 20 can be performed under appropriate software control. FIG 2 shows a flowchart illustrating an approach to the microprocessor 20 analysis of the signal as received by video in 10. The microprocessor 20 enters the routine at step 112. The closed caption data is extracted at step 114 by closed captioned data slicer 16. This data is in the form of a pair of characters. Microprocessor 20 looks for the specific code POP-ON within these characters. If the code POP-ON is detected, microprocessor compares the specific closed caption data with a list of undesirable words or phrases at step 122. If an undesirable word or phrase is detected, a command is sent from microprocessor 20 to analog switch 26 to mute audio portion of the signal at step 124. Microprocessor 20 then replaced the undesirable word or phrase with a more acceptable one at step 126. The closed caption data is then striped from the video signal by microprocessor 20 at step 128. The routine is then reset awaiting the next set of extracted closed captioned characters.

CLAIMS

What is claimed is:

1. An apparatus for processing an electronic signal including video and audio portions corresponding to audible and visible portions of the electronic signal, with said audio portion containing a spoken component related to the audible portion and with said video portion

5 containing an auxiliary information component corresponding to a visible representation of said spoken component of said electronic signal comprising:

a video input means to receive video portion of an electronic signal with video portion containing an auxiliary information component,

10 an audio input means to receive audio portion of an electronic signal with said audio portion corresponding to said video portion,

a video output means by which the video portion of the electronic signal is made available to a user of the apparatus,

an audio output means by which the audio portion of the electronic signal is made available to a user of the apparatus,

15 means for separating said an auxiliary information component from said video portion,

means for analyzing said auxiliary information component in order to determine if said auxiliary information component contains specific words or phrases, and means for,

20 (1) muting corresponding audio portion of said electronic signal if specific words or phrases are detected within said auxiliary information component,

(2) removing or replacing any detected specific word or phrase with another word or phrase found within said auxiliary information component of the video portion,

25 (3) disabling mute at the conclusion of receipt of the modified auxiliary information component,

means to synchronize said modified video portion with audio portion, and

means to transmit said synchronized signal to said video output and audio output.

30 2. The apparatus of claim 1, wherein said auxiliary information component is a closed caption signal.

3. The apparatus of claim 1, wherein said electronic signal is a television signal.

4. The apparatus of claim 1, wherein said electronic signal is a signal received from a storage device such as a video cassette recorder.

5. The apparatus of claim 1, further comprising:

35 means for selecting different levels of operation with respect to the muting of specific words or phrases, with said different levels include:

(1) a very tolerant level in which no word or phrase will be muted,

(2) a medium tolerant level in which a select amount of words or phrases will be muted,

40 (3) a strict level in which the list of specific words or phrases in an amount greater than the medium tolerant level will be muted.

6. The apparatus of claim 1, further comprising:

means for displaying of said modified and/or unmodified auxiliary information component at the time the specific word or phrase is replaced.

45 7. The apparatus of claim 6, further comprising:

means for selecting different levels of operation with respect to the displaying of said modified auxiliary information component, with said different levels include:

(1) a full captioning level in which all modified or unmodified

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auxiliary information data is displayed,

(2) a normal captioning level in which only modified words or phrases

which represent the replacement words or phrases are displayed,

(3) a no captioning level in which no word or phrase is displayed.

8. The apparatus of claim 6, wherein said auxiliary information component is a

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closed caption signal.

9. The apparatus of claim 7, wherein said auxiliary information component is a

closed caption signal.